WE CLAIM:

1. A container, comprising a thermoplastic material subject to stress cracking, the container comprising a shaped article with a portion of the article under stress, the container comprising a thermoplastic resin and about 1 to 1000 milligrams, per gram of the thermoplastic, of a liquid hydrocarbon oil stress cracking inhibitor.

2. The container of claim 1 wherein the liquid hydrocarbon oil comprises a coating on the base portion of the container.

3. The container of claim 1 wherein the liquid hydrocarbon oil is a liquid with a viscosity of less than about 500 cSt at 40°C.

4. The container of claim 1 wherein the liquid hydrocarbon oil is a perhydrogenated white hydrocarbon oil, aromatic oil or aliphatic oil.

5. The container of claim 1 wherein the thermoplastic comprises a polyester.

6. The container of claim 1 wherein the container comprises a container having two or more laminate layers.

7. The container of claim 1 wherein the container comprises a base with at least three lobes and is free of a base cup.

8. The container of claim 2 wherein the coating comprises a liquid hydrocarbon oil in an amount of about 0.1 to 1,000 milligrams per gram of container.

9. The container of claim 1 wherein the liquid hydrocarbon oil comprises a blend of oils.

10. The container of claim 1 wherein the hydrocarbon oil comprises a hydrocarbon oil plus an additive.

11. A container, comprising a thermoplastic material subject to stress cracking, the container comprising a shaped article with a portion of the article under stress, the container comprising a thermoplastic resin and a film on at least a portion of the container comprising about 1 to 1000 milligrams per gram of the thermoplastic of a liquid hydrocarbon oil stress cracking inhibitor.

12. The container of claim 11 wherein the thermoplastic comprises a polyester.

13. The container of claim 12 wherein the container comprises a container having two or more laminate layers.

14. A method of forming a shaped article having a stress crack inhibiting coating, the method comprises:

(a) forming a shaped article from a thermoplastic in a thermal shaping process resulting in a portion of the article with stress; and

(b) forming a coating on the surface of the article, the coating comprises a liquid hydrocarbon oil present in an amount of about 0.1 to 100 milligrams per square meter, wherein the liquid hydrocarbon oil comprises an aliphatic oil with a viscosity of less than 50 cSt at 40°C.

15. A method of lubricating a conveyor used in transporting thermoplastic containers, the method comprises conveying a thermoplastic container on a conveyor belt and applying to the conveyor belt a liquid hydrocarbon oil lubricant composition.

16. The method of claim 15 wherein the lubricant composition is sprayed on

the conveyor.

17. The method of claim 15 wherein the lubricant composition is brushed on the conveyor

18. The method of claim 15 wherein the lubricant composition is dripped on the conveyor.

19. The method of claim 15 wherein the lubricant composition is wiped on the conveyor.

20. The method of claim 15 wherein the liquid hydrocarbon oil is a perhydrogenated white hydrocarbon oil.

21. The method of claim 15 wherein the liquid hydrocarbon oil is an aliphatic oil.

22. The method of claim 15 wherein the thermoplastic comprises a polyester.

23. The method of claim 22 wherein the polyester comprises poly (ethylene-co-terephthalate).

24. The method of claim 23 wherein the polyethylene terephthalate container comprises a carbonated beverage container.

25. The method of claim 24 wherein the container comprises a pentaloid container.

26. The method of claim 24 wherein the container comprises a malt beverage container.

27. The method of claim 24 wherein the container comprises a milk container.

28. The method of claim 24 wherein the container comprises a base with at least three lobes and is free of a base cup.

29. A method of inhibiting stress cracking in a thermoplastic shaped article, the method comprising lubricating the interface between the conveyor and the shaped article with a liquid hydrocarbon oil forming a lubricated article.

30. The method of claim 29 wherein the lubricated article is filled with a liquid.

31. The method of claim 29 wherein the hydrocarbon oil comprises a hydrocarbon oil having a viscosity of less than about 50 cSt at 40°C.

32. The method of claim 29 wherein the liquid lubricating oil additionally comprises an additive.

33. The method of claim 29 wherein the thermoplastic comprises a polyester.

34. The method of claim 29 wherein the polyethylene terephthalate container comprises a carbonated beverage container.

35. The method of claim 29 wherein the container comprises a base with at least three lobes and is free of a base cup.

36. A method of lubricating the interface between a container and a moving conveyor surface, in the substantial absence of foamed lubricant and lubricant runoff, the method comprising:

(a) forming a continuous thin film of a liquid lubricant composition on a container contact surface of a conveyor; and

(b) moving a container on the conveyor surface in order to transport the container from a first location to a second location.

37. The method of claim 36 wherein the liquid lubricant comprises an emulsion of an organic phase and an aqueous phase.

38. The method of claim 37 wherein the emulsion contains about 5 to 50 wt% of the aqueous phase.

39. The method of claim 36 wherein the lubricant comprises a suspension of a particulate in a liquid medium.

40. The method of claim 36 wherein the container comprises an aluminum can or a thermoplastic bottle.

41. The method of claim 36 wherein the liquid lubricant is applied to the surface of the conveyor in an amount of about $2x10^{-4}$ to 0.05 grams of lubricant per each square inch of surface.

42. The method of claim 36 wherein the thickness of the continuous thin film of lubricant comprises a minimum thickness of an amount sufficient to provide minimum lubricating properties up to about 5 millimeters.

43. The method of claim 40 wherein the thermoplastic bottle comprises a polyethylene terephthalate bottle having a pentaloid base and the area of contact of the

lubricant with the bottle is limited to the tips of the pentaloid structure.

44. The method of claim 36 wherein the method is free of any substantial stress placed on the container for the purpose of changing the shape of the container.

45. The method of claim 37 wherein the emulsion is a composition stable to phase separation.

46. The method of claim 37 wherein the emulsion is unstable to phase separation after application of the lubricant to the conveyor surface.

47. The method of claim 36 wherein the coefficient of friction between the container and the conveyor surface is about 0.005 to 0.14.

48. The method of claim 36 wherein the lubricant is applied to the conveyor surface using a spray applicator.

49. The method of claim 36 wherein the container is filled with carbonated beverage and the interior of the container is maintained under substantial pressure.

50. The method of claim 36 wherein the continuous thin film of the lubricant is placed on the surface of the moving conveyor leaving an unlubricated margin on the conveyor edge.

51. The method of claim 50 wherein the width of the lubricated area on the conveyor is about 3 to 150 inches.

52. The method of claim 51 wherein the unlubricated margins comprise greater than about 0.5 inches.

53. The method of claim 36 wherein the conveyor receives about 50 to about 4000 containers per minute.

54. The method of claim 43 wherein contact with the polyester container is limited to no more than 2 millimeters of height form the conveyor surface in contact with the pentaloid lobes in the substantial absence of contact between the lubricant and the body of the container above the lobe area.

55. The method of claim 36 wherein the lubricant composition is formed into a thin film undiluted or up to a 5:1 dilution of the water with the lubricant.

56. The method of claim 36 wherein the lubricant composition is formed into a thin film in the absence of an inline dilution of the lubricant.

57. The method of claim 36 wherein the first location is a filling station and the second location is a labeling station.

58. The method of claim 43 wherein the area of the bottle in contact with the lubricant comprises about 10 to 250mm^2 .

59. The method of claim 36 wherein the thickness of the continuous thin film of lubricant comprises a minimum thickness of an amount sufficient to provide minimum lubricating properties about 0.0001 to 2 millimeters.

60. The process according to claim 36, additionally comprising cleaning said conveyor with a cleaning solution to remove the lubricant.

61. The process of claim 36 wherein the amounts of lubricant run off comprises less than about 1 gram per minute per lineal foot of conveyor.

62. A method of lubricating the interface between a container and a moving conveyor surface, in the substantial absence of foamed lubricant and lubricant runoff, the method comprising:

(a) forming a continuous thin film, having a thickness of about 0.0001 to 2 mm, of an emulsion lubricant composition comprising an oil phase and an aqueous phase, on a container contact surface of a conveyor; and

(b) moving a container on the conveyor surface in order to transport the container from a first location to a second location.

63. The method of claim 62 wherein the liquid lubricant is applied to the surface of the conveyor in an amount of about 0.002 to 0.05 grams of lubricant per each square inch of surface.

64. The method of claim 62 wherein the thickness of the continuous thin film of lubricant comprises a minimum thickness of an amount sufficient to provide minimum lubricating properties up to about 2 millimeters.

65. The method of claim 62 wherein the thermoplastic bottle comprises a polyethylene terephthalate bottle having a pentaloid base and the area of contact of the lubricant with the bottle is limited to the tips of the pentaloid structure.

66. The method of claim 62 wherein the coefficient of friction between the container and the conveyor surface is about 0.005 to 0.14.

67. The method of claim 62 wherein the container is filled with carbonated beverage and the interior of the container is maintained under substantial pressure.

68. The method of claim 62 wherein the continuous thin film of the lubricant is placed on the surface of the moving conveyor leaving an unlubricated margin on the conveyor edge.

69. The method of claim 68 wherein the width of the lubricated area on the conveyor is about 3 to 150 inches.

70. The method of claim 62 wherein the conveyor receives about 50 to about 4000 containers per minute.

71. The method of claim 65 wherein contact with the polyester container is limited to no more than 2 millimeters of height form the conveyor surface in contact with the pentaloid lobes in the substantial absence of contact between the lubricant and the body of the container above the lobe area.

72. The method of claim 65 wherein the area of the bottle in contact with the lubricant comprises about 10 to 250mm^2 .

73. The method of claim 62 wherein the thickness of the continuous thin film of lubricant comprises, a minimum thickness of an amount sufficient to provide minimum lubricating properties, of about 0.0001 to 1 millimeters.

74. A method of supplying a lubricant, for the method of lubricating the interface between a container and a moving conveyor surface, in the substantial absence of foamed lubricant and lubricant runoff, the method of lubricating comprising forming a continuous thin film of a liquid lubricant composition on a container contact surface of a conveyor; and moving a container on the conveyor surface in order to transport the container from a first location to a second location, said method of supplying comprising:

(a) forming a lubricating emulsion of an oil and a aqueous phase, and

(b) providing the lubricating emulsion to a bottling facility.

75. A method for lubricating the passage of a container along a conveyor, comprising applying a phase-separating mixture of a hydrophilic lubricating material and an oleophilic lubricating material whose specific gravity is less than or equal to the specific gravity of the hydrophilic lubricating material, to at least a portion of the container-contacting surface of the conveyor or to at least a portion of the conveyor-contacting surface of the container.

76. The method according to claim 75, wherein the mixture forms a substantially non- dripping film.

77. The method according to claim 75, wherein the mixture can be applied without requiring in-line dilution with significant amounts of water.

78. The method according to claim 75, wherein the mixture can readily be removed using a water-based cleaning agent.

79. The method according to claim 75, wherein the applied mixture undergoes phase-separation and provides a water-repelling lubricating layer having reduced water sensitivity.

80. The method according to claim 75, wherein the mixture is formed without adding surfactants that cause environmental stress cracking in polyethylene terephthalate.

81. The method according to claim 75, wherein the mixture comprises about 30 to about 99.9 wt. % of the hydrophilic lubricating material and about 0.1 to about 30 wt. % of the oleophilic lubricating material.

82. The method according to claim 75, wherein the hydrophilic lubricating material comprises a hydroxy-containing compound, polyalkylene glycol, copolymer of ethylene and propylene oxides, sorbitan ester or derivative of any of the foregoing.

83. The method according to claim 75, wherein the hydrophilic lubricating material comprises a phosphate ester or amine or derivative of either of the foregoing.

84. The method according to claim 75, wherein the hydrophilic lubricating material comprises glycerol.

85. The method according to claim 75, wherein the oleophilic lubricating material comprises silicone fluid, fluorochemical fluid or hydrocarbon.

86. The method according to claim 75, wherein the mixture has a total alkalinity equivalent to less than about 100 ppm $CaCO_3$.

87. The method according to claim 75, wherein the mixture has a coefficient of friction less than about 0.14.

88. The method according to claim 75, wherein the mixture is applied only to those portions of the conveyor in direct contact with the containers, or only to those portions of the containers in direct contact with the conveyor.

89. The method according to claim 75, wherein the mixture exhibits shear thinning while being applied and is non-dripping when at rest.

90. A lubricated conveyor or container, having a lubricant coating on a container- contacting surface of the conveyor or on a conveyor-contacting surface of the

container, wherein the coating comprises phase-separated layers of oleophilic lubricating material and hydrophilic lubricating material.

91. The conveyor or container according to claim 90, wherein the coating has a total alkalinity equivalent to less than about 100 ppm $CaCO_3$ and the containers comprise polyethylene terephthalate or polyethylene naphthalate.

92. The conveyor or container according to claim 90, wherein the containers comprise crystalline and amorphous surface portions and the coating contacts one or more crystalline surface portions of the container but does not contact significant amorphous surface portions of the container.

93. A Conveyor and container lubricant compositions comprising an unstable mixture of an oleophilic lubricating material and a hydrophilic lubricating material.

94. The lubricant composition according to claim 93, wherein when the mixture is applied to a surface the oleophilic lubricating material forms a film with the hydrophilic lubricating material, thereby providing a water-repelling lubricating layer having reduced water sensitivity.

95. The lubricant composition according to claim 93, wherein the hydrophilic lubricating material comprises a phosphate ester, amine or derivative of either of the foregoing.

96. The lubricant composition according to claim 93, wherein the mixture comprises mineral oil or mineral seal oil.

97. The lubricant composition according to claim 93, wherein the mixture is substantially free of surfactants that cause stress cracking in PET.

98. A method for lubricating the passage of a container along a conveyor, comprising applying a mixture of a water-miscible silicone material and a water-miscible lubricant to at least a portion of the container-contacting surface of the conveyor or to at least a portion of the conveyor-contacting surface of the container.

99. The method according to claim 98, wherein the mixture forms a substantially non- dripping film.

100. The method according to claim 98, wherein the mixture is formed without adding surfactants that cause environmental stress cracking in polyethylene terephthalate.

101. The method according to claim 98, wherein the mixture comprises about 0.05 to about 12 wt. % of the silicone material and about 30 to about 99.95 wt. % of the hydrophilic lubricant.

102. The method according to claim 98, wherein the mixture also comprises water or a hydrophilic diluent.

103. The method according to claim 102, wherein the mixture comprises about 0.5 to about 8 wt. % of the silicone material, about 50 to about 90 wt. % of the hydrophilic lubricant, and about 2 to about 49.5 wt. % of water or hydrophilic diluent.

104. The method according to claim 98, wherein the silicone material comprises a silicone emulsion, finely divided silicone powder, or silicone surfactant.

105. The method according to claim 98, wherein the silicone material comprises a silicone emulsion and the mixture comprises water.

106. The method according to claim 98, wherein the mixture has a total alkalinity equivalent to less than about 100 ppm $CaCO_3$.

107. The method according to claim 98, wherein the mixture has a coefficient of friction less than about 0.14.

108. The method according to claim 98, wherein the containers comprise polyethylene terephthalate or polyethylene naphthalate.

109. The method according to claim 98, wherein the mixture is applied only to those portions of the conveyor that are in direct contact with the containers, or only to those portions of the containers that are in direct contact with the conveyor.

110. The method according to claim 98, wherein the mixture exhibits shear thinning while being applied and is non-dripping when at rest.

111. A lubricated conveyor or container, having a lubricant coating on a container- contacting surface of the conveyor or on a conveyor-contacting surface of the container, wherein the coating comprises a mixture of a water-miscible silicone material and a water-miscible lubricant.

112. The conveyor or container according to claim 111, wherein the coating comprises about 0.5 to about 8 wt. % of the silicone material, about 50 to about 90 wt. % of the hydrophilic lubricant, and further comprises about 2 to about 49.5 wt. % of water or hydrophilic diluent.

113. The conveyor or container according to claim 111, wherein the silicone material comprises silicone emulsion, finely divided silicone powder, or silicone surfactant; and the water-miscible lubricant comprises a hydroxy-containing compound, polyalkylene glycol, copolymer of ethylene and propylene oxides, sorbitan ester or derivative of any of the foregoing lubricants.

114. The conveyor or container according to claim 111, wherein the silicone material comprises silicone emulsion, finely divided silicone powder, or silicone surfactant; and the water-miscible lubricant comprises a phosphate ester, amine or derivative of either of the foregoing lubricants.

115. The conveyor or container according to claim 111, wherein the containers comprise crystalline and amorphous surface portions and the coating contacts one or more crystalline surface portions but does not contact significant amorphous surface portions of the container.

116. Conveyor and container lubricant compositions comprising a mixture of a water- miscible silicone material and a water-miscible lubricant.

117. The lubricant composition according to claim 116, wherein the mixture comprises about 0.05 to about 12 wt. % of the silicone material and about 30 to about 99.95 wt. % of the hydrophilic lubricant.

118. The lubricant composition according to claim 116, wherein the mixture comprises about 0.5 to about 8 wt. % of the silicone material, about 50 to about 90 wt. % of the hydrophilic lubricant, and further comprises about 2 to about 49.5 wt. % of water or hydrophilic diluent.

119. The lubricant composition according to claim 116, wherein the mixture comprises about 0.8 to about 4 wt. % of the silicone material, about 65 to about 85 wt.

% of the hydrophilic lubricant, and further comprises about 11 to about 34.2 wt. % of water or hydrophilic diluent.

120. The lubricant composition according to claim 116, wherein the silicone material comprises a silicone emulsion, finely divided silicone powder, or silicone surfactant; and the water-miscible lubricant comprises a hydroxy-containing compound, polyalkylene glycol, copolymer of ethylene and propylene oxides. sorbitan ester, or derivative of any of the foregoing lubricants.

121. The lubricant composition according to claim 116, wherein the silicone material comprises a silicone emulsion, finely divided silicone powder, or silicone surfactant; and the water-miscible lubricant comprises a phosphate ester, amine or derivative of either of the foregoing lubricants.

122. The lubricant composition according to claim 116, wherein the mixture comprises a silicone emulsion.

123. The lubricant composition according to claim 122, wherein the mixture is substantially free of surfactants aside from those that may be required to emulsify the silicone compound sufficiently to form the silicone emulsion.

124. The lubricant as claimed in claim 116, wherein the lubricant comprises a polymer containing silicone.

125. The lubricant as claimed in claim 124, wherein the polymer comprises a polydimethyl siloxane, a polyalkyl siloxane, or a polyphenyl siloxane.

126. The process for lubricating a container or conveyor for the container, comprising applying to at least a portion of a surface of the container or conveyor, a substantially non-aqueous lubricant as claimed in claim 116.